

ABSTRACT

An IS-OFDM system for ultra-wideband (UWB) wireless communications that suppresses narrow-band interference, comprising an in-premises base station (IBS) is described. The IBS further comprises an IS-OFDM transceiver for communicating with a plurality of in-premises terminals (ITs) without creating interference outside an in-premises perimeter. Further, a method for operating an IS-OFDM system for ultra-wideband (UWB) wireless communications that suppresses narrow-band interference and provides local area networking services, in-premises distribution of broadcast cable channels and in-premises wireless access and routing to external networks is described, without creating interference outside an in-premises perimeter.